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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,966	07/28/2003	Patricia A. Wang	200209420-1	6184

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EXAMINER

SHOSHO, CALLIE E

ART UNIT PAPER NUMBER

1714

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/628,966	Applicant(s) WANG ET AL.	
	Examiner Callie E. Shosho	Art Unit 1714	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 21 June 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☒ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: see attachment. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: 1-19, 22-42, 45 and 46.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____.
13. ☐ Other: _____.

Callie E. Shosho
Primary Examiner
Art Unit: 1714

Attachment to Advisory Action

1. Applicants' amendment filed 6/21/06 has been fully considered but the amendment has not been entered given that it raises new issues that would require further consideration.

The amendment raises new issues that would require further consideration under 35 USC 112, first paragraph.

Specifically, claim 1 and claim 24 have each been amended to recite "said styrene-maleic anhydride copolymer interacts with said organic acids by rendering said pigment dispersed with said polymer in said black ink insoluble by transforming said polymer into a water-insoluble protonated form". It is the examiner's position that this phrase fails to satisfy the written description requirement under 35 USC 112, first paragraph since there does not appear to be a written description requirement of the cited phrase in the application as originally filed, *In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989) and MPEP 2163.

As support for the above amendment, applicants point to paragraph 30 of the present specification. However, this portion of the specification states that an ink employing an organic acid and having appropriate pH will render insoluble the pigment dispersion in the black inks by transforming the styrene-maleic anhydride polymer into water-insoluble protonated form. Thus, while this portion of the present specification provides support to recite that the color ink (which comprises the organic acid) renders insoluble the pigment dispersion in the black ink, it does not provide support to recite that it is the organic acid that renders insoluble the pigment dispersion. That is, there is no disclosure in the present specification that it is the organic acid itself that interacts with the styrene-maleic anhydride. There is no disclosure in paragraph 30 that the styrene-maleic anhydride interacts with the organic acid.

Further, even if the amendment were entered, the amendment would not overcome the 35 USC 103 rejection of record, namely, Parazak (U.S. 6,281,268) in view of Zhu (U.S. 5,889,083).

Applicants argue that there is no motivation to utilize Zhu given that there is nothing in Zhu that discloses that the styrene-maleic anhydride would act to prevent color bleed between color inks and black inks. Applicants argue that there is no disclosure in Zhu of black-to-color bleed.

It is agreed that there is no disclosure in Zhu of preventing color bleed between color inks and black inks. However, it is also noted that there is no recitation or requirement in the present claims regarding color bleed.

Further, while there is no disclosure in Zhu that the styrene-maleic anhydride is used to control bleed, it is noted that obviousness under 103 is not negated because the motivation to arrive at the claimed invention as disclosed by the prior art does not agree with appellant's motivation. *In re Dillon*, 16 USPQ2d 1897 (Fed. Cir. 1990), *In re Tomlinson*, 150 USPQ 623 (CCPA 1996). Thus, although Zhu discloses utilizing styrene-maleic anhydride copolymer to fix colorant to substrate and not to prevent color bleed, the reference remains relevant against the present claims.

Additionally, although there is no disclosure that the organic acid or multivalent salt interacts with styrene-maleic anhydride to control black-to-color bleed, given that Parazak in combination with Zhu discloses ink as presently claimed, it is clear that the organic acid or salt would intrinsically interact with styrene-maleic anhydride to control bleed.

Applicants also argue that applicants' invention is directed to the use of color inks that are dye-based and black inks that are pigment-based and that there is no disclosure in Zhu as to what effect styrene-maleic anhydride might have on dyes in color inks.

However, it is noted that the present claims require "pigment-based inkjet ink set". There is no disclosure in the present claims that the color inks comprise dyes.

Applicants also argue that the black ink of Parazak contains acrylate polymer and that there is no motivation to substitute acrylate polymer of Parazak with styrene-maleic anhydride of Zhu.

It is agreed that there is no disclosure in Parazak of styrene-maleic anhydride, however, it is significant to note that Parazak discloses that the ink contains various additives, including polymers, to improve the properties of the ink. However, there is no disclosure that these polymers include styrene-maleic anhydride, which is why Parazak is used in combination with Zhu. While Parazak does also disclose the use of acrylic polymer, given the open language of the present claims, i.e. "comprising", it is clear that the present claims are open to the inclusion of additional ingredients including acrylate polymer as disclosed by Parazak. Further, it is also noted that Zhu (col.5, lines 14-17) discloses using styrene-maleic anhydride in combination with acrylic copolymers including those disclosed by Parazak.

Applicants argue that there is no disclosure of ink set in Zhu. However, although there is no disclosure in Zhu of ink set, Zhu is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed

invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, the use of styrene-maleic anhydride in ink jet inks, and in combination with the primary reference, discloses the presently claimed invention.

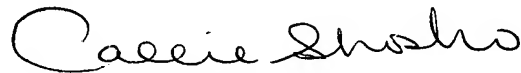
Applicants argue that Zhu requires combination of styrene-maleic anhydride and wax. However, while it is agreed that Zhu discloses combination of styrene-maleic anhydride and wax provides abrasion resistance, on the one hand, Zhu is only used for its teaching of styrene-maleic anhydride in inks wherein Zhu teaches that the use of styrene-maleic anhydride fixes colorant to substrate. On the other hand, in light of the open language of the present claims, i.e. “comprising”, the use of wax is clearly not excluded from the scope of the present claims.

Applicants also argue that the examiner did not establish *prima facie* case of obviousness.

However, it is noted that Parazak discloses ink comprising black ink comprising water, co-solvent, self-dispersing pigment, surfactant, and additive, including polymer, to improve various properties of the ink and color ink that comprises water, co-solvent, multivalent salt, and organic acid. There is no disclosure of styrene-maleic anhydride. Zhu, which is also drawn to ink jet inks, disclose the use of styrene-maleic anhydride to fix colorant to substrate. Although there is no disclosure that the organic acid or multivalent salt interacts with styrene-maleic anhydride to control black-to-color bleed, given that Parazak in combination with Zhu discloses ink identical to that presently claimed, it is clear that the organic acid or salt would intrinsically interact with styrene-maleic anhydride to control bleed.

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Thus, given that Parazak discloses that the ink comprises additive, including polymer, to improve various properties of the ink, given that Zhu disclose the use of styrene-maleic anhydride copolymer in ink and disclose motivation for using such copolymer, namely, to fix colorant to substrate, i.e. improve adhesion of the ink, and given that Zhu discloses using styrene-maleic anhydride in combination with other polymers including acrylate polymer of the type disclosed by Parazak, it is the examiner's position that a *prima facie* case of obviousness has been established.



Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
7/5/06